WHAT IS CLAIMED IS:

1. A method of separating oligodendrocytes or progenitor cells thereof from a mixed population of cells comprising:

selecting a promoter which functions only in said oligodendrocytes or progenitor cells thereof;

introducing a nucleic acid molecule encoding a fluorescent protein under control of said promoter into the mixed population of cells;

allowing the oligodendrocytes or progenitor cells thereof to express the fluorescent protein; and

separating the fluorescent cells from the mixed population of cells, wherein said separated cells are said oligodendrocytes or progenitor cells thereof.

2. The method of claim 1, wherein said introducing comprises viral mediated transduction of said oligodendrocytes and progenitors thereof.

3. The method of claim 2, wherein said viral mediated transduct comprises adenovirus-medicated transduct.

4. The method of claim 1, wherein said introducing comprises electroporation.

5. The method of claim 1, wherein said introducing comprises biolistic transformation.

6. The method of claim 1, wherein said introducing comprises liposomal mediated transformation of said plurality of cells.

7. The method of claim 1, wherein said separating comprises fluorescence activated cell sorting.

8. The method of claim 1, wherein said promoter is a CNP-P1 promoter, a CNP-P2 promoter, a CNP-P1+P2 promoter, a NCAM promoter, a myelin

basic protein promoter, a JC virus minimal core promoter, a myelin-associated glycoprotein promoter, or a proteolipid protein promoter.

9. The method of claim 8, wherein the promoter is a P/CNP2 promoter.

10. The method according to claim 1, further comprising:
identifying the cells of said mixed population of cells that are fluorescent, wherein the identifying step is after the allowing step.

11. The method of claim 1, wherein the mixed population of cells is in a tissue.

12. The method of claim 11, wherein the tissue is brain tissue.

13. The method of claim 11, wherein the tissue is spinal cord tissue.

14. The method of claim 11, wherein the mixed population of cells is in a cell culture.

15. The method of claim 1, further comprising:
transplanting the separated cells into a subject.

16. The method of claim 1, wherein the oligodendrocytes or progenitor cells thereof are human in origin.

17. An enriched or purified preparation of isolated postnatal oligodendrocytes.

18. The enriched or purified preparation of isolated oligodendrocytes of claim 17 which are human.

19. An enriched or purified preparation of isolated oligodendrocyte progenitor cells.

20. The enriched or purified preparation of isolated oligodendrocyte progenitor cells of claim 19 which are human.